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Pixel Tracking and UTMS: A Study of Nintendo Co., Ltd.

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Pixel Tracking and UTMS: A Study of Nintendo Co., Ltd.

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Davidson Honors College Capstone Project

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December 11, 2023

Pixel Tracking and UTMs: A Study of Nintendo Co., Ltd.

Introduction

Ever received an ad from a site you visited yesterday? That's no accident. Marketers have tools to target and retarget individuals based on online activity. That activity, as well as personal information (gender, age, geographic location, etc.), make up the data marketers use in their campaigns. This is important, because targeted marketing can lead to a host of valuable business outcomes, including improved brand reputation, informing and educating the consumer, and improving the likelihood of purchase (Indeed Editorial Team, 2022). Some of the tools include pixels and UTMs. These snippets of code get embedded within websites and URLs to track and send data from the user to the company running the ad campaign. Different platforms have their own versions of pixels too. However, pixels and UTMs differ slightly in the data they track, their placement on a site, and when businesses should utilize them.

In order to understand the value of pixel tracking and UTMs for a company, this report focuses on Nintendo Co., Ltd. (Nintendo). Before analyzing the pixel tracking and UTMs, it is helpful to first understand the company and its operating environment. Therefore, this report will begin with a profile of the company, conduct an analysis of the environment, propose a strategy that capitalizes on a revenue opportunity for Nintendo, and then explain how the Pixel Tracking and UTMs can support the implementation of the strategy. This report will provide a deep dive into Pixels and UTMs to explain how and why marketers use these tools, the precautions to consider while taking/using peoples' personal data, and Nintendo's use of Pixels and UTMs.

About Nintendo

Nintendo's history starts in 1889 as a company manufacturing playing cards. They progressed through the decades, broke into new markets such as arcade games and at-home TV consoles by the late 1970s, and now even exist in the space of hand-held gaming devices and movie productions ("Nintendo Official Site", n.d.). Their commonly known logo is shown below in Figure 1 ("Nintendo Official Site", n.d.).

Figure 1

Nintendo's current logo taken from their website



In terms of Nintendo's primary products and services, they, "develop, manufacture and sell electronic home entertainment products...Its major products include computer-enhanced dedicated video game platforms, playing cards, and other gaming-related products...under Nintendo and Wii brand names," ("Nintendo Co Ltd company Profile," 2023). The main goal of any business is to make money, so a necessary step in analyzing company strategy involves looking at total and divisional revenues. In Nintendo's case, they,

reported revenue for the June quarter of 461.34 billion yen (\$3.2 billion), rising 50% year-on-year... Nintendo saw a boost from the "The Super Mario Bros. Movie," based on the company's best-known characters, which has generated more than \$1 billion at the box office since its April release...The Japanese gaming giant also released a highly-anticipated game called "The Legend of Zelda: Tears of the Kingdom" in May, which it said was the fastest selling title in the history of the series (Kharpal, 2023).

In terms of Nintendo’s divisional revenue breakdown, a regional division can easily be established amongst the countries in which they operate. For example, “the United States accounts for 36.5% of the global games consoles market value,” in the year 2022 and, “home entertainment is the largest segment of the games consoles market in the United States, accounting for 82.8% of the market's total value” (“Games Consoles in the United States,” 2023). Further dive into years’ previous market shares within the US can be seen in Figure 2 (“Games Consoles in the United States,” 2023) below.

Figure 2

US Game Consoles Market Category Segmentation: % share, by value, 2017-2022

Category	2017	2018	2019	2020	2021	2022
Home Entertainment	60.4%	53.8%	45.9%	72.2%	78.4%	82.8%
Hybrid	29.8%	40.1%	51.1%	26.5%	21.5%	17.1%
Handheld	9.8%	6.1%	3.0%	1.3%	0.0%	0.0%
Total	100%	100%	100%	100%	99.9%	99.9%
SOURCE: MARKETLINE					MARKETLINE	

Another important breakdown to address includes a customer segment breakdown.

Nintendo has target audiences for different products. For example, the Nintendo Switch gaming console is targeted toward “people between the ages of 12–30” (Cruz, 2021), whereas the Super Mario Brothers Movie, “is aimed at 5-year-olds of all ages, meaning the child in all of us” (Travers, 2023). The Switch has a more rigid age group because it attempts to market, “to their older audience [] by capitalizing on Millennial nostalgia” (Cruz, 2021). Having multiple customer segments enables the company to have a larger customer audience.

Strategic Analysis of the Operating Environment

A business performs a strategic analysis to gather information that will ultimately influence a decision. Often, this type of analysis gets split into two parts: external and internal.

External analysis involves any factor outside a company's control ("External Analysis," 2023). Market trends, political on-goings, technological advancements, etc. are all examples of categories that need examined during this external analysis process. Because of so many existing factors, the past, as well the present, must be studied so that decisions made today have a chance for future success.

The second part of strategic analysis- internal analysis- explores everything within the company itself. This examination looks at the business plan, core competencies (skills and abilities rather than any physical or financial asset) and resources, and its competitive standing. The purpose of this analysis is to declare the strengths and weaknesses of the business, then develop a plan to shrink the gap between them. In tying both analyses together, a business determines what falls within their capacity to perform and what parts of the industry they can capitalize on (Adams, 2022). Overall, strategic analysis and all the deliverables produced during its process, create a comprehensive strategy for the business to utilize.

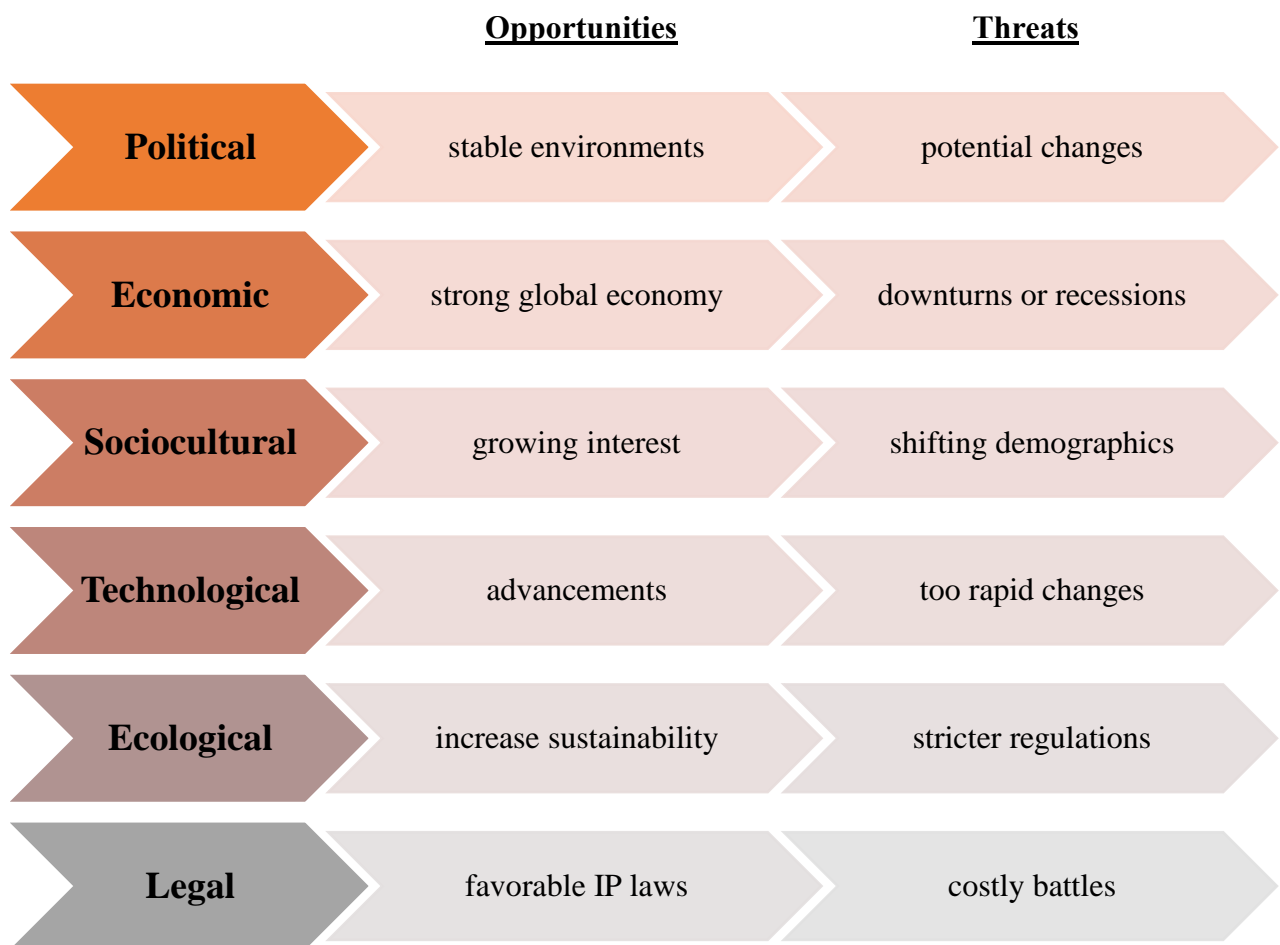
I. EXTERNAL ANALYSIS

An external analysis examines the industry environment of a business (External Analysis, 2023). An *industry* involves competing companies offering similar products or services (meaning they have substitutes for each other). Nintendo operates in the video game software industry. They lead their industry as the biggest competitor, but they do have competition with companies such as Sony, Microsoft, Sega, Atari, and others developing video game software. Industries have market segments, meaning each competitor will market the same targeted audience. Depending on the industry, they may also use the same supply and/or distribution chains. So, with the ideas of both industries, and analysis, in mind, one commonly used tool is known as PESTEL, a macro-environment tool ("Marketing: PESTLE Analysis," 2023). The macro- side of

economics looks at the economy to identify potential opportunities and threats (for example, looks at interest rates, growth rates, GDP, inflations, unemployment). So, the PESTEL diagram shown below displays the key opportunities and threats of six different categories of macroeconomic factors that impact Nintendo. These factors include politics, the economy, sociocultural trends, technological developments, ecological or environmental aspects, and legalities. The PESTEL Diagram below shows an analysis for Nintendo, which are further described below.

A. PESTEL Diagram

Macro-Environment Analysis



Political Factors

An opportunity for political factors might involve political stability in key markets like Japan and the United States, which provide conducive environments for Nintendo's business operations. Then, a threat might involve changes in government regulations related to gaming content, intellectual property rights, or trade policies that impact Nintendo's global operations.

Economic Factors

A strong global economy can lead to increased consumer spending on gaming consoles and software, which would create opportunity for Nintendo. Then, opposingly, economic downturns or recessions may lead to reduced consumer disposable income, negatively impacting Nintendo's sales.

Sociocultural Factors

A sociocultural opportunity example would include growing interest in gaming as a form of entertainment. This kind of social interaction can drive increased demand for Nintendo's products. A threat might include a change in consumer preferences and demographics, such as a shift toward mobile gaming, posing challenges to Nintendo's traditional console-based business model.

Technological Factors

Advancements in technology (such as virtual reality and augmented reality) can open new avenues for Nintendo to innovate and create unique gaming experiences, so this would be an opportunity. A threat might involve too rapid of technological changes that make Nintendo's existing hardware and software obsolete if the company fails to adapt quickly.

Ecological Factors

An opportunity in ecological/environmental aspects include a growing emphasis on environmental sustainability that can be leveraged by Nintendo to improve its products' eco-friendliness, potentially attracting environmentally conscious consumers. On the other hand, a threat would include stringent environmental regulations and rising concerns about electronic waste disposal that could increase production costs and impact the disposal of older gaming hardware.

Legal Factors

Opportunity within the legalities of Nintendo include Intellectual Property (IP) protection and strong enforcement of copyrights that would safeguard Nintendo's franchises like Mario and Zelda. Legal threats or challenges related to patent infringement, antitrust issues, or regulatory compliance can result in high-cost legal battles and damage the company's reputation.

Synthesis of PESTEL

The most important PESTEL opportunity for Nintendo falls under the Legal Factors. Protecting their intellectual property ensures the ideas and designs created within Nintendo cannot be copied or replaced by any competitor within the US market (for example, "The Super Mario Bros. Movie"). Any revenue and/or profit shares created by IP will flow towards Nintendo because of the competition's inability to market substitutes protected in that legal bind.

The most significant threat Nintendo faces falls under Economic Factors, specifically economic downturns. A downturn would reduce consumer spending on nonessential items, resulting in decreased revenue for Nintendo and increased costs due to inflation.

B. Industry Life Cycle Analysis

Much like the life cycles of products and businesses, industries too can have highs and lows in between creation and extinction. The life cycle of an industry depends on market

competition, products, consumer demands, etc. Analyzing the life cycle of an industry is another layer of the External Analysis for a business. Kyle Peterdy of Corporate Finance Institute (year) explains that, “understanding where an industry is in its life cycle is important for financial analysts, entrepreneurs, and other stakeholders when seeking to assess the competitive landscape and a company’s ability to grow, generate profits, and produce free cash flow.”

Nintendo operates within the videogame software industry. Software is a segment making up part of the videogame industry. It also includes consoles, apps, merch, theme parks, and more. However, software arguably has the largest, or most important, segment because of its ability to stand alone. Meaning, software can exist through applications, but hardware (consoles) needs a software to have purpose.

The stages within the lifecycle include the introduction stage, growth stage, maturity stage, and finally, decline stage. In the introduction stage, a new product (or technology) hits the market. In terms of the videogame software industry, the introduction stage occurred in the 1970s with arcades, then the 1980s when consoles became available. Growth stage happened in the late 20th/ early 21st century. PCs and mobile devices rapidly expanded the gaming market through software. Innovation and increased competition characterized this stage. Then came the maturity stage (which is still currently the stage the industry sits in). The market became saturated with multiple platforms and various games. Major players within the industry have been identified by their share of the market. Small players don’t really exist anymore – they’ve been acquired by the larger players. Business models also characterize this stage. Options consumers have include F2P games and DLC which are well-established models. Lastly, standardized practices in the industry for game development, marketing, and distribution have

been established. In the final stage, the decline stage, consumer interest decreases, and the industry goes down.

Key Drivers of Revenues

Drivers of revenues in this industry hinge from game sales. First of all, money gets acquired from initial game sales – physical or digital. Then, companies can offer in-game/ in-app purchases to further increase revenues. However, for companies with games having a free-to-play (F2P) model, they commonly use in-game/ in-app purchases to generate sales. Nintendo offers both F2P games and games with an upfront cost. So, Nintendo can obtain extra revenues through microtransactions (electronic purchases while playing the game, such as cosmetic changes of a character), downloadable content (known as DLC, allows gamers to purchase things like extension packs, or additional content that gets downloaded after purchasing the initial game), or virtual goods (intangible assets traded online, like the addition of a special power, a potion, a sword, or even an extra character, for example).

Another driving force of revenues for the software gaming industry includes subscription-based models. These will most likely be a SAAS model, which stands for Software as a Service. When offering SAAS, most companies will most likely offer a base plan and some sort of premium plan. A premium model is another type of subscription-based model. Consumers will pay a monthly or yearly fixed rate for access to the game or gaming portal. Nintendo has *Nintendo Switch Online*, allowing consumers access to multiple games with their membership portal. They offer individual or family pricing with both regular and premium subscription options. The use of advertisements drives revenues for the videogame software industry as well. Mainly found in F2P games, these sponsored ads provide an extra revenue stream for companies.

Lastly, licensing and merchandising can benefit companies if their videogames become successful enough to lead to such opportunities. For example, Nintendo released *The Super Mario Bros. Movie* in early April of 2023. Movies and forms of media serve as one example of licensing, while toys and other merch provide other examples.

Key Drivers of Costs

The videogame software industry requires necessary investments that create expenses. Developing the product is first and foremost. Nintendo must invest in design, programming, art, and sound. High-quality graphics, complex gameplay mechanics, and immersive storytelling can significantly increase development costs. During the creation and development stages, salaries and labor of Nintendo's employees need to remain highly competitive, especially to retain the top developers, designers, programmers, and artists within the industry.

Next, the company needs to market and distribute the product/software. So, promotional content assists in the success of that product, but drives up costs. Protecting ideas and intellectual property (IP) can easily become one of the most expensive aspects of a business. Obtaining an IP license doesn't have a high cost, but protecting and defending the IP does. Fees add up quickly in terms of court filings, cases, lawsuits, etc. Testing and quality assurance (QA) can consume a significant amount of costs because of the attention to detail and expertise needed to identify and rectify bugs and glitches. Infrastructure and operational expenses such as running and maintaining servers, cloud hosting, and customer support get added to the list of costs as well.

Synthesis of Industry Life Cycle

In the current stage of maturation, costs, revenues, and market size can all be impacted. In maturity, the market saturation impacts rivalry among existing competitors. To keep market share, Nintendo needs to market well, and protect their IP which increases costs. They have an

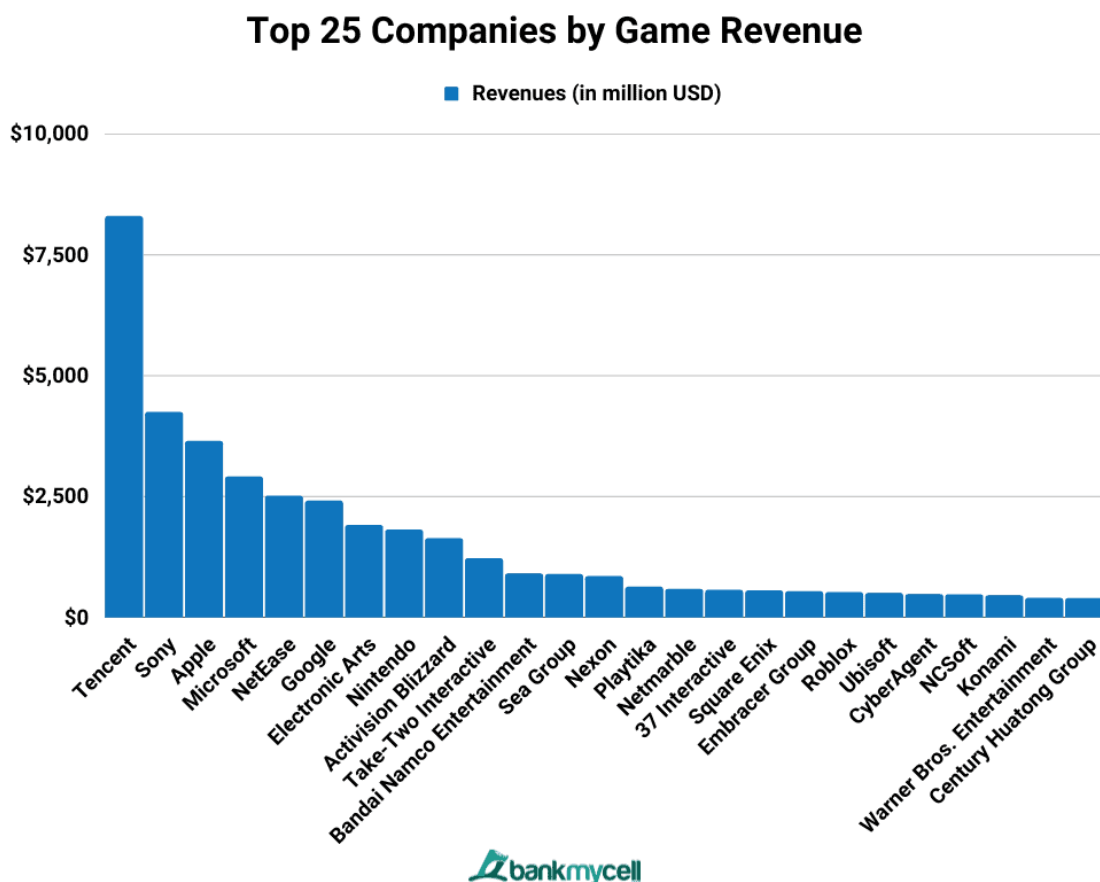
established business model by utilizing a F2P model and games with an upfront cost, generating revenues. Market size isn't greatly changing since the major players in the industry have been identified. However, new players constantly emerge with new innovations, but they have high barriers to entry in this industry.

C. Industry Strategic Groups

The major competitors within the software gaming industry include Tencent, Sony, Apple, Microsoft, Net Ease, Google, Electric Arts, and Nintendo (ranked in that order). This ranking is based on revenues, and the table below (Table 1 (Turner, 2023)) shows this data, along with other key players in the industry and their revenues.

Table 1

Top 25 gaming companies' revenues as of third quarter of 2022

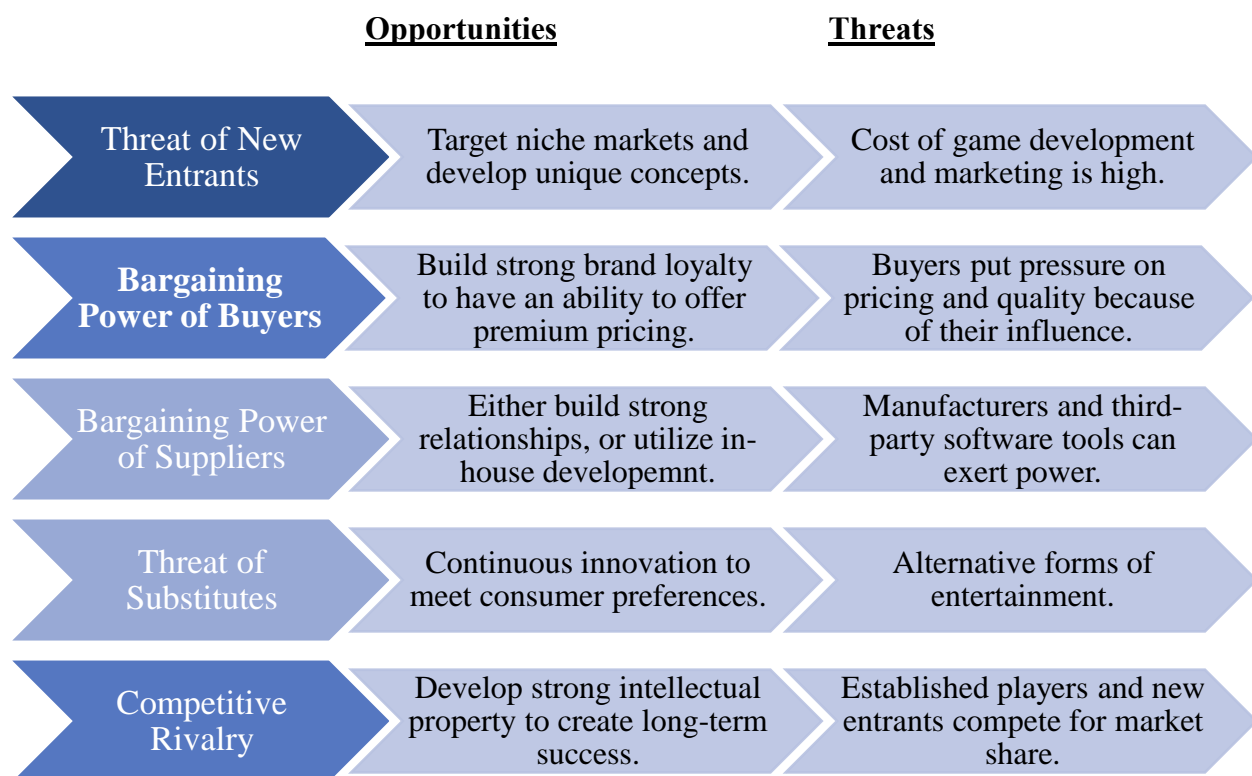


D. Industry Forces (Porter's 5-Forces) Analysis

Continuing along with the industry analysis is an examination of Porter's 5-Forces.

These forces reflect the competitive pressure of the industry ("Porter's 5 Forces Explained and How to Use the Model," 2023), which can limit revenues and increase costs. Below is a diagram of the key threats and opportunities for each of the five forces, which are described in the next section.

Diagram of Porter's 5-Forces



Threat of New Entrants

The videogame software industry has a moderate threat of new entrants, so an opportunity lies in being able to target niche markets with innovative gaming concepts. However, high development costs and marketing costs pose a threat, and a barrier to entry.

Bargaining Power of Buyers

Creating a strong brand loyalty among consumers through producing high-quality content and a unique gaming experience is an opportunity for Nintendo. On the other hand, gamers have an influence over the industry because of their ability to switch between different games and platforms. This puts pressure on price points and the quality of content, creating a threat.

Bargaining Power of Suppliers

Nintendo can capitalize on the opportunity of relationship building with the suppliers in the videogame software industry. Alternatively, they can forego dependency on suppliers by developing products in-house. A threat lies in the suppliers' power over the supply chain. Hardware manufacturers and third-party software providers have control/power over Nintendo and other players in the industry because of a dependency on certain products.

Threat of Substitutes

There's a minimal threat of substitutes in this industry, so Nintendo can take advantage of this by meeting the changing preferences of consumers. The threat, however, exists in different forms of entertainment. Video games offer an interactive experience, whereas books and tv cannot- explaining why the threat to the industry is relatively low.

Competitive Rivalry

Innovation, market diversification, and strategic partnerships offer opportunities to "stand out" from other competitors in the industry. Nintendo should also take advantage of their intellectual property to help enable long-term success. The intense rivalry in the industry creates a threat to both established players and newcomers. Gaming quality, the features within the game, and marketing strategies all add to the competition.

Synthesis of Porter's 5-Forces

The most important opportunity within Porter's 5-Forces for Nintendo is innovation and creativity. Innovation and creativity effect the threat of new entrants, the bargaining power of buyers, the threat of substitutes, and the competitive rivalries within the industry. This impacts Nintendo's profitability in terms of both revenues and costs. Costs incur through the protection of intellectual property, but revenues increase when Nintendo captures market share when they develop unique and creative products.

The biggest threat Nintendo faces is the rivalry among existing competitors. Because of high competition, companies within the industry must constantly improve and innovate to meet the needs of customers. This also means they must market new developments to keep or gain their market shares. Innovation and marketing both have high costs associated with them, especially when trying to out-do rivals.

II. INTERNAL ANALYSIS

This section begins the internal analysis section of the report. Below details different tools for internal analysis and conducts VRIO, SWOT, qualitative and quantitative analysis, as well as a strategy formulation.

A. Business Model

A company's business model defines the values created in operations, its products and services, revenue generation, the target market, and assumed costs. In simpler words, it's the company's plan to make a profit (Kopp, 2023). For Nintendo, the business model mainly focusses on the integration of their hardware and software. They implement effective business models that creates value for each of their lines of business. The hardware and software divisions utilize a pay-as-you-go business model, supported by a differentiation strategy. There's value in operating in both the hardware and software industries because it produces opportunities for

innovation, development, and creativity. Through the sale of their hardware and software products (consoles and first-party titles), licensing and merchandising characters, they create value through revenues. Their global presence (distributions) has value due to reach. Intellectual property is valuable because of competitor's inability to market exact substitutes. Just as characteristics within a business model create value, some aspects create no value. For example, limited support from third-parties creates a smaller game library compared to other competitors. This may cause consumers to choose another console company, so they have access to a wider variety of games.

B. Value Chain Analysis

Value Chain analysis helps define the competitive advantages a company holds over its industry rivals. The chain is a process of activities (both primary and secondary) where a company attempts to add value into different aspects of the business. Nintendo can add value into the production of games, the marketing, the customer support, etc. Below breaks down some of Nintendo's primary and secondary activities within the videogame software industry using Michael Porter's value chain framework.

Primary Activities

Under primary activities, Nintendo has inbound and outbound logistics, operations, marketing, and services. Inbound logistics is the acquisition of resources to make cartridges and consoles, whereas outbound logistics is the distribution of the final product. So, sourcing raw materials would fall under inbound, and discussions of supply chain management or physical or digital distribution falls under outbound. Operations detail game development, quality assurance (QA- a checks-and-balances system ensuring high-standards are met), and localization (translations of games into different languages). Having marketing campaigns and sales channels

allows Nintendo to reach a wide audience, but also ensures the right consumers are targeted during the campaigns. Services Nintendo provides include their customer support for any tech support or questions about subscription services.

Support Activities

Supporting activities include any “backbone” part of an organization. For example, Nintendo’s infrastructure of data centers supports the operating and gaming systems. Human resources is in charge of hiring and firing any individual at Nintendo. Their job is to find people with creativity and drive, while removing people who don’t align with the company’s values. The research and development (R&D) department requires an investment of time and money to stay ahead of competitors. Finally, firm infrastructure includes both organizational structure and IP- critical components of Nintendo’s organization.

C. Integration Synergies in the Value Chain

The value chain functions (Accounting, Finance, Human Resources, Marketing, Management Information Systems, and International Business) should have a connection to the same financial activities or objectives.

Financial Dimension

The value chain functions within Nintendo must share a connection of financial objectives for the company to create long-term profits. The procurement of materials must be cost-effective to justify the purchase. Efficient production processes of consoles and software can beneficially impact financial performance by sustainably reducing costs if done properly. Marketing campaigns directly impact revenues. If sales promotions and pricing strategies are marketed to the right consumers at the right time, profit and shareholder returns get maximized.

Technical Dimension

Value chain functions also connect financial objectives to enhance and reinforce technological systems within Nintendo. Research and development (R&D) leads to tech innovations, explaining why Nintendo puts such a high investment into this dimension. Design and manufacturing integrate components and technologies in consoles, effecting the end-user experience. The choices made within the tech dimension impact the design, quality, and performance of Nintendo's products.

Structural Dimension

The value chain functions connect financial objectives with policies and behaviors within a company. For Nintendo, the corporate structure (divisions, subsidiaries, and partnerships) defines how collaboration and coordination amongst the company should be conducted. When done properly, structure aids in good decision making, task delegation, and controlling and rewarding behaviors.

Cultural Dimension

The value chain functions can also connect financial objectives with a well-functioning organizational culture. The culture within the corporation, Nintendo specifically, encourages unique and creative thoughts and ideas. Innovation is such a crucial part of Nintendo's success, so this forward thinking is reflected in their values. The gaming community and loyal fanbase Nintendo has cultivated is due to a strong mission statement relayed throughout the company, being a role model and leader in the industry, and having responsible and ethical values and norms.

D. VRIO Analysis

VRIO Analysis is another Internal Analysis framework that determines whether an organization's resources are (V) valuable, (R) rare, (I) inimitable, and (O) organized, and

therefore contributing to advantages or disadvantages (“What is VRIO?,” 2022). Below is a list of resources and capabilities important to Nintendo, categorized as strengths and weaknesses. In the next section, the key strengths and weaknesses will be analyzed under the VRIO framework.

List of Resources and Capabilities	Label as a <u>Strength</u> or <u>Weakness</u>
1. Strong Intellectual Property (IP)	Strength
2. Innovative Hardware	Strength
3. First-Party Game Development	Strength
4. Global Brand Recognition	Strength
5. Longevity in the Industry	Strength
6. Limited Third-Party Support	Weakness
7. Technological Lag	Weakness
8. Online Services	Weakness
9. Risk-Averse	Weakness
10. Dependency on Key Franchises	Weakness

Synthesis of VRIO

Two of Nintendo’s key strengths from the list above are their Strong Intellectual Property (IP) and their innovative hardware. Under Nintendo’s IP protections is a *valuable* portfolio containing Mario, Zelda, Pokémon, and more. These IPs are *rare* and unique because of any competitors’ inability to replicate them within the industry. The characters and stories are *imitabile* because of the nostalgia and recognition Nintendo has built around them. The IPs are also *organized* in the sense of management and Nintendo’s capitalization of them through

merchandizing and licensing. This creates a sustainable competitive advantage for Nintendo because of their ability to meet customer demands and needs. Their innovative hardware creates *value*. Nintendo has a history of creative ideas and designs that have created success for the company. Innovation and the ability to devote so much investment into R&D can be *rare* in this industry, but Nintendo has the ability to do so. Their consistent developments are a summation of understanding the user experience, experience in the industry, and creativity, which is difficult to replicate (*imitable*). In terms of *organization*, Nintendo effectively creates hardware and software that compliment each other well, supporting its competitive advantage. Innovative hardware is also a sustainable competitive advantage, helping to increase revenues through the perceived value of the consoles.

The biggest weaknesses Nintendo has are the limited third-party support and a technological lag within the games. Since Nintendo solely provides their own games on their platforms, some consumers may think there's a restriction of variety on the Nintendo platforms. So, for some consumers, not having third-party support decreases the *value*. This isn't a *rare* occurrence for Nintendo, as their history shows. Nintendo could *imitate* other competitors' strategies of utilizing third-party support if they wanted to diversify the games provided on their platforms. The *organization*, or relationships, with third parties could be improved in the future, which would lessen this weakness. Third party developers have created more successful games than what Nintendo offers. Having a limit of third-party support means Nintendo potentially misses out on the revenue from those titles. Nintendo has a history of having a technological lag within their games. This decreases *value* because it limits their ability to produce high-quality graphics and processing capabilities, which could affect the end-users' experience. Since Nintendo has prioritized creativity and uniqueness in their games, they have a recurring (not

rare) issue of processing power. Nintendo could *imitate* their competitor's investments into more powerful hardware to lessen this weakness. They have also *organized* their business to focus on innovation rather than processing power. Nintendo would have to change their organizational pattern to help lessen this weakness. They don't have the ability to provide the same value of processing powers, so they may not be able to meet consumers' demands or needs, which could lead to a loss of revenues. Below, in Figure 1, shows Super Mario and his graphic upgrades from 1985 – 2010. Software will always have a shorter timeframe than hardware. However, Figure 1 (Robertson, 2010) shows the slow progression Nintendo has had in upgrading Mario- an example of technological lag.

Figure 1

Mario throughout the years



III. SWOT ANALYSIS

SWOT Analysis shows the Strengths, Weaknesses, Opportunities, and Threats within an organization (Schooley, 2023). The key strengths and weaknesses were derived from the VRIO Analysis, and the key opportunities and threats come from the PESTEL and Porter's 5-Forces Analyses.

Diagram of SWOT



IV. COMPETITIVE ADVANTAGE ANALYSIS

In a competitive advantage analysis, comparing ratios of different quantitative and qualitative metrics amongst competitors tells a company of any competitive “edge” they have.

A. Quantitative Analysis

The ratios displayed in the table below provide a glimpse of Nintendo’s financial health compared to competitor’s (“Consolidated Financial Highlights,” 2023). It’s important to consider multiple ratios and measures when considering competitive advantage because not every measure accurately represents the health of a company. The financial ratios below can vary based on product cycles, market fluctuations, strategic decision making, etc.

Table of Financial Ratio Comparisons Across Companies

Metric	Nintendo	Competitor 1: Sony (Playstation)	Competitor 2: Microsoft (Xbox)
Metric 1: Profit Margin	10-15%	8-12%	8-12%
Metric 2: ROA	8-12%	8-12%	8-12%
Metric 3: Debt-to-Equity	Low	Moderate	Moderate
Metric 4: Current Ratio	1.5-2	1.5-2	1.5-2

B. Qualitative Analysis – Competitive Metrics

Qualitative analysis shows non-financial factors/metrics to compare amongst companies within the same industry. The table below provides four non-financial metrics with standings compared with competitors Sony and Microsoft.

Table of Competitive Metrics Comparisons Across Companies

Metric	Nintendo	Sony (Playstation)	Microsoft (Xbox)
Metric 1: Customer Service	Good reputation	Mixed reviews of reputation	Not a great history, but has improved
Metric 2: Employee Satisfaction	Fewer publicized initiatives	Varies across divisions	Overall high satisfaction
Metric 3: Corporate Social Responsibility (CSR)	Has initiatives, but cannot compete with Sony or Microsoft	Various projects, not as publicized as Microsoft	Many significant commitments to CSR
Metric 4: Environmental,	Does not have as many ESG practices	Not as high profile as Microsoft	Very Active in ESG Practices

Social, Governance (ESG) Practices	compared to Sony and Microsoft		
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Synthesis of Competitive Advantage Analysis

Quantitatively, Nintendo has a higher comparative advantage, especially in terms of Profit Margin. Overall, they average a 2-3% higher profit margin than Sony and Microsoft. This is a very large and sustainable advantage because Nintendo's sales are based on both their game releases (software) and consoles (hardware). Their competitors' sales mainly consist of hardware sales. The length and sustainability Nintendo can hold will depend on their ability to keep developing new creative and innovative games, as well as make developments to their consoles. It also depends on competitors' abilities to create software gaming systems that perform well enough to boost their profit margins in comparison to Nintendo's. Qualitatively, Nintendo falls short compared to Sony and Microsoft in every category except Customer Satisfaction. However, Nintendo needs to put investment into Employee Satisfaction, CSR, and ESG because of the impact these metrics can have on the company's success. Low Employee Satisfaction measures can deter people from applying to Nintendo. CSR's and ESG's importance in the eyes of consumers is growing in popularity. So, to meet the needs and demands of consumers, Nintendo will need to make some changes within their corporate structure to better support these movements.

V. STRATEGY FORMULATION

Through SWOT Analysis, an opportunity arose for Nintendo to address. They have an opportunity to capitalize on mobile gaming. Currently, the company has nine mobile games available for download, however, there's no synchronicity (meaning all games are downloaded

separately). Nintendo could place their current mobile games selection into a single platform (and potentially add more games- especially their F2P options). They could use a related diversification strategy to build an app available for download. The goal of this would be to add another revenue stream. This isn't quite breaking into a new market because of their current presence within mobile gaming, and the fact they have the software capabilities to make the move. However, this would help sustain their competitive advantage through using the IP on a new platform. This strategy will allow Nintendo to fulfill their corporate-level objective of growth through tapping into a new revenue stream. The figure in Appendix A shows the growth of the mobile gaming industry over the past several years. If Nintendo chose to implement a mobile gaming platform using a related diversification strategy, they would help sustain their competitive advantage and reach their corporate level objectives.

VI. PIXEL TRACKING AND UTM ANALYSIS

In order to capitalize on the proposed diversification opportunity, Nintendo will need to establish themselves as a key player in mobile gaming. Thus, digital marketing will be a primary activity. As previously explained, pixel tracking and UTMs can be important marketing tools to reach the intended consumer base and motivate sales.

In the next sections, the report will explain pixel tracking and UTMs, discuss Nintendo's use of these tools, and provide a conclusion to the strategic recommendation.

A. What are Pixels?

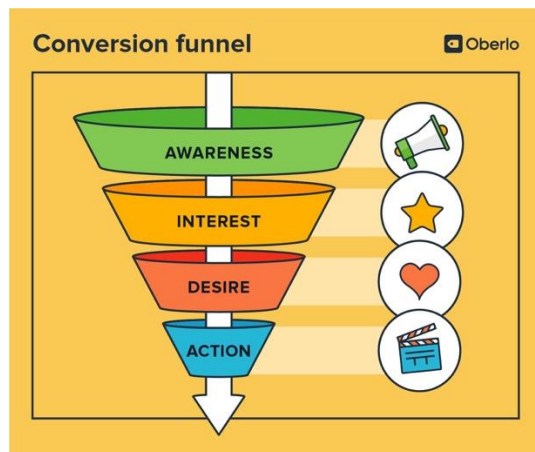
Simply put, Tracking Pixels (plainly known as pixels in the business world) are a piece of code within a website that send user data to a database. Just one inch of a digital screen has ninety-six pixels in it. All that's needed to make a tracking pixel is a 1x1 area/image (Tracking Pixel, n.d.). Marketers can choose to make them invisible on a screen as well. Researching types

of pixels produced a multitude of varying answers, however, two types were constant among every list: retargeting and conversion. Retargeting pixels function comparably to a browser cookie (their distinction detailed later). They tell advertisers who has shown interest in the business by visiting the site. These pixels track certain details of a user's story that hint the user wants to buy something or return to the site in the future. An action such as saving an item to a cart, but never completing a purchase, would explain why an individual gets served a retargeting ad. Conversion pixels track actions that impact the marketing funnel (aka the conversion funnel). This is the type of pixel Meta employs on their platforms- they have their own pixel builder that implements directly onto a business's Facebook or Instagram page called Meta Pixel ("Conversion Tracking," n.d.). The marketing funnel, as shown in Figure 2 (Markus, n.d.), outlines the story a user/consumer experiences while making a purchase. First, they become aware of a product or business, they get interested in what's being sold, they develop a desire to have it, then finally make a purchase. The conversion pixel tracks the actions coinciding to these stages. The goal of any campaign aims to increase the number of people reaching the last stage (action/conversion). So, by tracking the KPIs (key performance indicators) of the other stages, marketers learn what to improve along the funnel. KPIs show user behavior through the measurement "of performance over time for a specific objective" ("What is a KPI?," n.d.). This could mean many things. In terms of conversions, a user responds to a call-to-action. For example, a user could subscribe to an email thread, install an app, fill out a form, make a landing page visit, start a free trial, etc. Specifically, the awareness stage KPIs could include organic impressions or number of views. Interest stage may involve measuring clicks, scroll depths, and bounce rates (Smallman, 2023). The desire stage can be measured through items added to cart or

sign-ups for product launches. The action stage KPIs are the actual conversions – they’re counted through the number of purchases or analyzed through revenue growth.

Figure 2

Marketing/ Conversion Funnel



There are so many options/things a business could track on their website, but tracking every possible thing wouldn't make sense. Nintendo probably won't care if you scroll all the way down their 'News & Events' page, however, The New York Times needs to make sure their stories pique the interest of readers, so they'll want to know how far down the article users scroll.

B. How Are Pixels Integrated Onto A Website?

Inserting a pixel tracker means an additional code gets embedded in a website's backend code. Because the insertion of a pixel requires knowledge of marketing KPIs, and the need to understand (to an extent) how coding languages work, *pixel providers* saw a business opportunity. These providers help businesses navigate the creation and management of data collection through pixel tracking. LinkedIn even has a list of approved third-party pixel providers with the ability to track views or conversions from a business's Careers Page or from their job postings. LinkedIn's list includes:

- google-analytics.com
- bizographics.com
- amazonaws.com
- clickmeter.com
- xiti.com
- googleadservices.com
- turn.com pager.net
- 2o7.net
- doubleclick.net
- serving-sys.com
- brockmeyer.nl
- onrecruit.net
- hodes.com

When these providers implement the snippets of code into a website, they manipulate the backend of a website. For example, if a business uses HTML as their markup language, the pixel would be implemented in the scripting language, most likely JavaScript. Image 1 (“Tracking Pixels,” n.d.) shows what the backend code may look like.

Image 1

Example of pixel code in HTML

```

```

```

```

```

```

The ‘’ references the image as a tag and holds a space on the screen for whatever falls between the carrots– in this case, the image is the pixel (“HTML tag,” n.d.). “URL tracking pixel” is the reference name of the pixel. Width and height tell the computer the dimensions of the pixel. The fact the width and height in this example equal zero means the pixel will be hidden from the user. Style, in the way it’s coded, also determines the pixel’s prominence on screen. Position, visibility, and display, all following style, ensures the code holds space on the page for the pixel, allowing it to run, but obstructing it from view. Image 2 (Morris, 2019) shows an example of the actual pixel code itself. The pixel code connects the website to the data collecting platform.

Image 2

Example of Meta Pixel Code

```

17 <!DOCTYPE html>
18 <html lang="en" id="home" class="no-js"><?php language_attributes(); ?><?php output_for_cookie_page_type(); ?>
19 <head>
20 <meta http-equiv="Content-Type" content="<?php bloginfo('html_type'); ?>; charset=<?php bloginfo( 'charset' ); ?>" />
21 <?php // Google Chrome Frame for IE ?>
22 <!--[if IE]><meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1"><![endif]-->
23 <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no"/>
24 <link rel="profile" href="http://gmpg.org/xfn/11"/>
25 <?php // Meta Tags ?>
26 <?php if(!empty($GLOBALS['enable_seo'])) { ?>
27 <?php get_template_part('framework/core','seo'); ?>
28 <?php }?>
29
30 <link rel="pingback" href="<?php bloginfo('pingback_url'); ?>" />
31 <?php wp_head(); ?>
32 </head>
33
34

```

C. What's The Difference Between Pixels And Cookies?

Most people have heard of cookies – or interacted with a website that uses them. It's a much more commonly used term than pixel because of the politics surrounding user data. Warnings pop-up after clicking onto a site making the user “accept all cookies” before accessing the webpage. However, both marketing tools track users. Pixels require no such warning. In fact, because marketers can choose to make them invisible, users have no idea they've triggered a pixel to start tracking them when they've clicked onto a site. The difference is that cookies are considered a ‘third-party tracking’ tool, meaning the data gets shared. Most websites partner with advertising and analytics companies to gain an extra revenue stream (an extra party amongst the business and user, making them the third party involved). This means the cookies get set by an external server, not the website (Doles, 2023). The cookies get stored in a user's browser after clicking “accept cookies” when prompted. Then, when the user accesses another site operating on the same server, the cookie comes out of hiding and can track across those sites. The data then gets sent to the third-party advertising and analytics companies. Pixels, on the other hand, are set by the website. They deliver the info they've gathered to the website's server, which get stored in a database (normally the analytics platform). This isn't considered third-party because no sharing

amongst other companies happens. Pixel code too, unlike Cookies, can track users across their devices since it logs IP addresses (which tell of geographic location), and can therefore connect the devices for data collection purposes (Vinogradov, 2023). Shown below, Image 3 (Vinogradov, 2023) gives a great differentiation of aspects of pixels and cookies.

Image 3

Pixels vs Cookies

Aspect	Tracking Pixel	Cookies
Nature	Invisible image (usually 1x1 pixel)	Small text files
Location	Embedded in content (webpages, emails, ads)	Stored on user's device
Primary Use	Monitor interactions and gather data	Store user data and preferences
Data Collection	Sends data back when content is accessed	Gathers data over multiple sessions/interactions
Scope of Tracking	Specific to content where it's embedded	Tracks user behavior across various web pages/sites
Duration	Active as long as content is live	Can be session-based or persistent for a set duration
Retargeting	Commonly used for retargeting campaigns	Facilitates personalized experiences based on history
User Control	Hard for users to detect without specialized tools	Users can easily delete or block via browser settings

D. What Are UTMs?

UTM stands for Urchin Traffic Monitor. This was the original name for Google Analytics (GA). Nowadays, the term UTM refers to a snippet of code attached to the URL of a landing page as a method of tracking website traffic. Google Analytics (more specifically, Universal Analytics (UA)) is the name for the software system that collects and interprets the data collected by UTMs. Currently, Google is transitioning from Universal Analytics to Google Analytics 4

(GA4). UA based its data off sessions and pageviews, whereas GA4 bases off events and parameters (Proehl, 2023). These versions count the data differently, so comparing a UA account to a GA4 account will produce different numbers in categories with the same title. Even though the numbers differ, it doesn't necessarily mean the account was setup incorrectly. GA4 is supposed to be more accurate, so that also means that the way it counts the metrics (such as sessions, events, conversions, and views vs data streams) differs from UA ("URL builders," n.d.). Marketers refer to both versions as "Google Analytics," or "GA," which can sometimes get confusing since it's used interchangeably. The transition has also impacted how UTMs are constructed. The configuration of UTMs can be a little tricky, so just like there are pixel providers, UTM builders exist to make the process easier. As mentioned, a UTM gets attached at the end of a URL, also known as a *tag*. The UTM tag has parameters within its setup that help organize the data for reports. So, when an ad gets clicked on, the user gets sent to a landing page, and the UTM tag sends information to GA4 – the user has no idea their actions are collected, and there's no difference in the quality of the website with the addition of the UTM.

Because building a UTM has a tedious process, Google has certain criteria to follow that ensures data gets collected properly in UA/GA4. After a business's landing page URL comes a question mark (?). This communicates to Google Analytics that a UTM will follow. A general rule-of-thumb while constructing UTMs is to include these parameters: source, medium, and campaign ("URL builders," n.d.). However, UA required source and medium, whereas GA4 only needs one parameter, but it could be any parameter. Some other parameters a business could implement include a source platform, a term or keyword, or content. GA4 does not report on the parameters of creative formats or marketing tactics like UA did. The different parameters are separated by an ampersand (&). A source is the platform the campaign will run on, such as

Google, Facebook, or X. Then follows the campaign medium. The medium explains how the traffic was brought to the website. For example, this could be search or CPC (paid search), social, display, etc. Search and CPC are both Google campaigns. Social includes medias like Facebook, Instagram, X, LinkedIn, YouTube, Pinterest, etc. Display will include ads from either Google or The Trade Desk (TTD). Source and medium both have clear structures with only so many options provided by Google. However, campaign names are developed by the marketer creating the UTM. So, having clear and concise naming conventions is helpful once the data gets pulled into Analytics and reports are being built. Campaign names might include the business's name, the time of year the campaign will run, a significant aspect of the ad, or even a slogan. So, to put into perspective, assume Nintendo wants to run a marketing campaign to celebrate their 135th year of operations in 2024. One of the ads in the campaign will be a 30 second, non-skippable ad on YouTube. The source equals YouTube. Medium equals social. The campaign name may be something like 30sec-135years. So, putting all the parameters together and attaching it to the end of Nintendo's landing page URL would look something like this:

- utm_source=youtube&
- utm_medium=social&
- utm_campaign=30sec-135years
- https://www.nintendo.com/us/?utm_source=youtube&utm_medium=social&utm_campaign=30sec-135years

E. Why Should Businesses Use Both Pixels & UTMs?

Businesses should use both pixels and UTMs because of the consumer insights gained from tracking. Pixels help businesses target and retarget their intended audiences while obtaining consumer data to help make future marketing and product decisions. UTMs enable businesses to understand how customers land on their site, as well as gauge the performance and effectiveness of the ad of driving website traffic (Mineo, 2023). Some pixels (like the Meta Pixel) have the

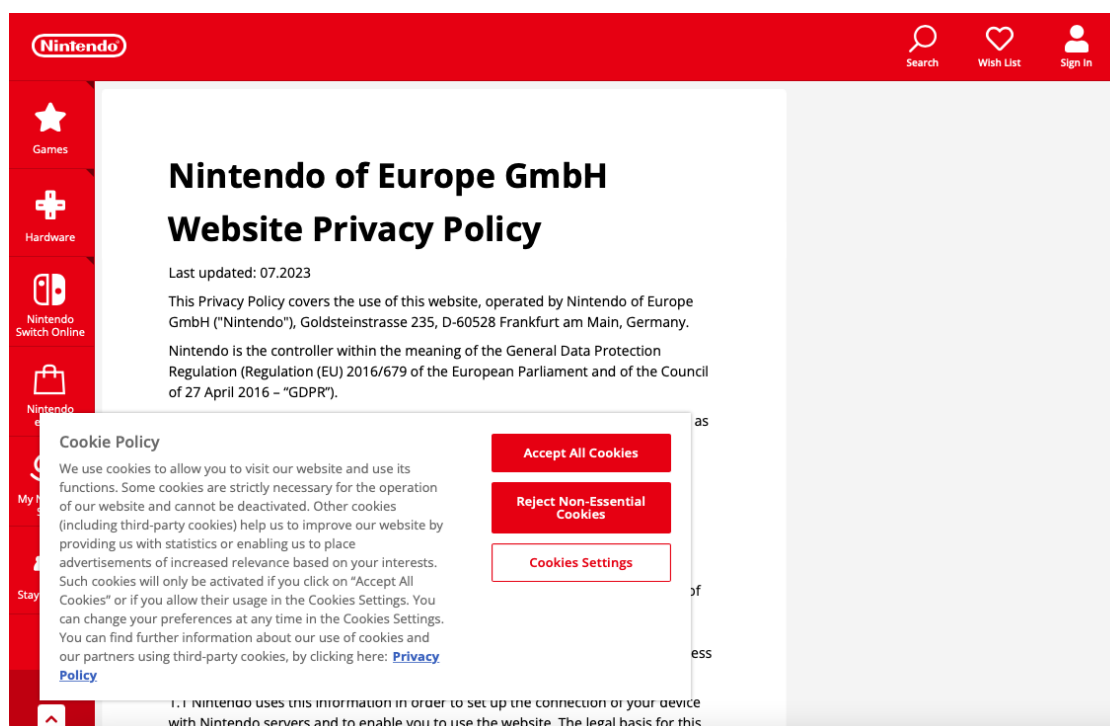
ability to be measured through the GA4 platform. UTMs are the natural connection to Analytics, however, there's a work-around using GA4 tracking IDs and Data Streams (a new feature in GA4 allowing data from multiple platforms to be analyzed in a single property (Jagannath, 2023)) that allows the data taken by the Meta Pixels to stream into Analytics.

F. Connection to Nintendo

When a user clicks on a Nintendo's webpage, the following cookie warning pops onto the screen (Image 4 ("Website Privacy Policy," n.d.):

Image 4

Screenshot of Cookie Policy from Nintendo's Website

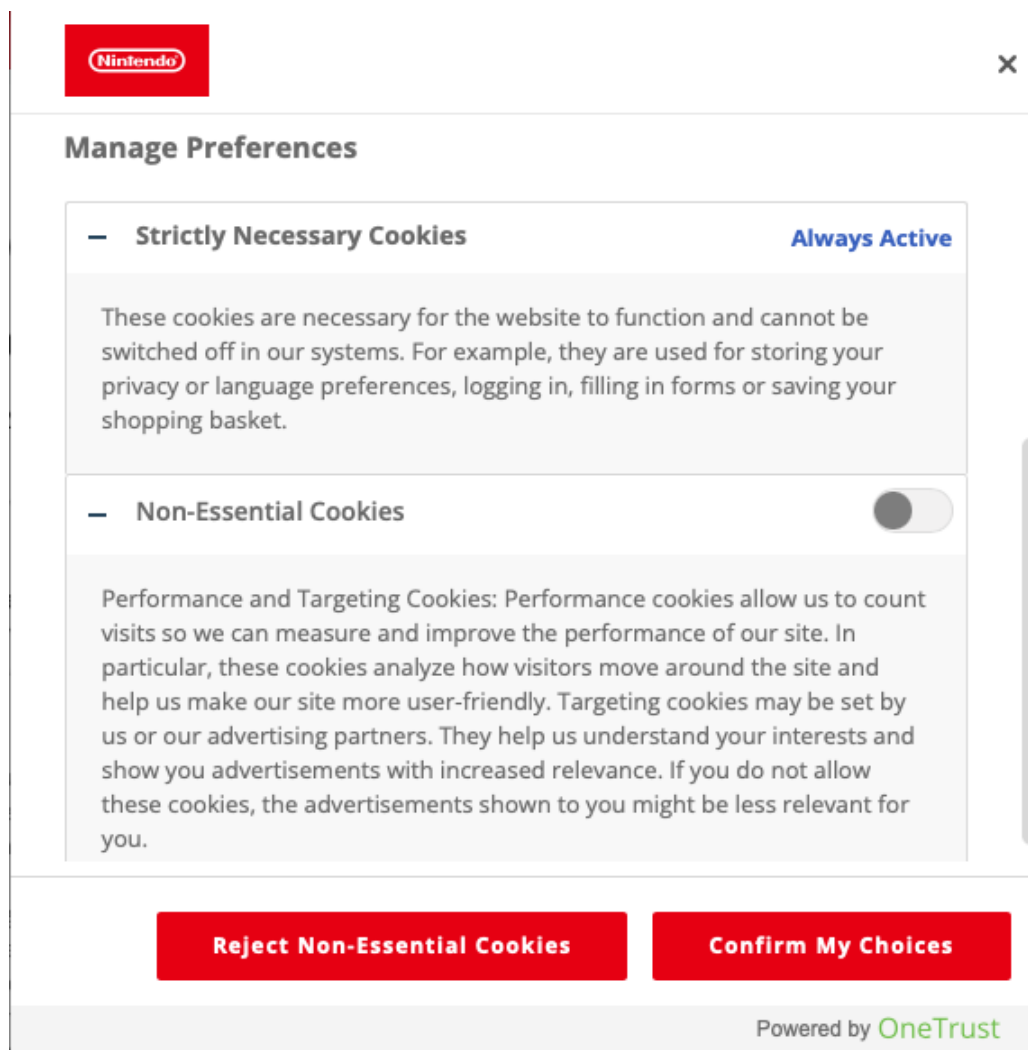


The screenshot shows the Nintendo website's privacy policy page. The page has a red header with the Nintendo logo and navigation icons for Search, Wish List, and Sign In. A left sidebar contains navigation links for Games, Hardware, Nintendo Switch Online, and Nintendo eShop. The main content area is titled "Nintendo of Europe GmbH Website Privacy Policy" and includes the text: "Last updated: 07.2023", "This Privacy Policy covers the use of this website, operated by Nintendo of Europe GmbH ("Nintendo"), Goldsteinstrasse 235, D-60528 Frankfurt am Main, Germany.", and "Nintendo is the controller within the meaning of the General Data Protection Regulation (Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 – "GDPR").". A "Cookie Policy" overlay is visible in the foreground, containing the text: "We use cookies to allow you to visit our website and use its functions. Some cookies are strictly necessary for the operation of our website and cannot be deactivated. Other cookies (including third-party cookies) help us to improve our website by providing us with statistics or enabling us to place advertisements of increased relevance based on your interests. Such cookies will only be activated if you click on "Accept All Cookies" or if you allow their usage in the Cookies Settings. You can change your preferences at any time in the Cookies Settings. You can find further information about our use of cookies and our partners using third-party cookies, by clicking here: [Privacy Policy](#)". The overlay also features three buttons: "Accept All Cookies", "Reject Non-Essential Cookies", and "Cookies Settings".

Then, clicking on the Cookie Settings option in the Cookie Policy pop-up will display this explanation of their necessary and non-essential cookies (Image 5 (“Website Privacy Policy,” n.d.)):

Image 5

Screenshot of Cookie Preferences from Nintendo’s Website



Nintendo follows the GDPR guidelines on their website. The GDPR (General Data Protection Regulations) are a European Union set of laws with a strict premise on the governance of data. Nintendo has an entire webpage dedicated to the privacy policy, explaining the use of trackers embedded on the webpages. Nintendo uses data processing through its servers. Cookies,

necessary and non-essential (as shown in Image 5), are present, as well as tracking cookies. The tracking cookies get analyzed through Google Analytics, specifically through Google Ireland. Nintendo's Privacy Policy states the use of Analytics is to "help Nintendo analyse how visitors use the website" ("Website Privacy Policy," n.d.). They use Google Ads Remarketing and Google Marketing Platform/DoubleClick tools to help drive the correct advertisements to users as well. Nintendo also uses Hotjar- a company using "heatmaps" to track and analyze consumer behavior on a website ("What is Hotjar?," n.d.). They use the Meta Tracking Pixel and the Twitter Website Tag for custom audience building during retargeting campaigns. Another interesting category listed on their Privacy Policy page is the list of third-party tracking cookies. They have eighteen total companies, majority of the partnerships starting in October of 2015 ("Website Privacy Policy," n.d.). Finally, Nintendo uses Google reCAPTCHA to determine whether forms get filled in by humans or bots, analyzed through IP addresses, mouse movements, time spent on page, etc. ("Website Privacy Policy," n.d.).

G. Concerns

The collection and use of data has been a difficult and politically charged subject for a good while. The GDPR and CCPA (California Consumer Privacy Act) set the standards in privacy regulations within the EU and US. However, the protection of data and privacy rights of consumers remains an ethical issue. There's talk of third-party cookies fading away. This would solve the issues surrounding consumer privacy but create a huge need in the digital marketing industry. Luckily, as discussed earlier, pixels and UTMs aren't considered third-party, so there's no fear of their disappearance. However, it's realistic to assume policies and regulations around gathering and using data will change and increase in the future.

VI. CONCLUSION

The digital marketing space can provide so much good for businesses and consumers. Tools like pixels and UTMs enable businesses to gather and interpret data to ensure their campaigns target the right consumers. Reaching the correct target audience benefits all parties involved- the consumer gets an ad for something they want, and the business increases the probability of a consumer moving through the marketing funnel. Nintendo should use both pixels and UTMs in their efforts to market the proposed mobile gaming software platform. When beginning the campaign, Nintendo should focus the KPIs to hit awareness and reach goals. This would spread the word of the new platform. Keeping in mind the policies surrounding data protection, Nintendo needs to make marketing decisions beneficial to their customers that still contribute to their end goal: capitalizing on their ability to leverage their current software through a new mobile gaming platform, boosting their competitive advantage in the videogaming software industry.

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